



Indiana State Department of Health

Epidemiology Resource Center

Quick Facts

About Arboviral Encephalitis

What is arboviral encephalitis?

Arboviruses are a group of viruses that are transmitted in nature by arthropods (insects and related animals) when they bite animals and humans. In the United States, the arthropods that most commonly transmit diseases are mosquitoes and ticks.

Some of these arboviruses can cause serious illness, such as encephalitis, which is inflammation (swelling) of the brain.

How are arboviral diseases spread?

People become infected with arboviruses generally by the bite of a mosquito or tick. In the United States, ticks transmit two kinds of arboviral illnesses, Colorado tick fever and Powassan fever. These tick-borne viral infections have never been reported in Indiana.

Mosquitoes are known to transmit 18 viral diseases in North America. The most common mosquito-borne diseases in the United States are Eastern equine encephalitis, Western equine encephalitis, West Nile virus, St. Louis encephalitis,

and LaCrosse encephalitis. With the exception on Western equine encephalitis all of these diseases have been reported in Indiana.

What are the symptoms of arboviral encephalitis?

Depending on the virus, many infections may go unrecognized or cause a very mild illness. Some people will have a flu-like illness lasting for several days. Others may have the signs and symptoms of encephalitis, including: fever, personality changes and confusion, abnormal reflexes, muscle weakness, paralysis, seizures, and facial nerve paralysis. Individuals with more severe illness may have a long recovery and may have lifetime disabilities resulting from the infection. Death may occur in less than 1% of cases (West Nile virus) or up to 30% of cases (Eastern equine encephalitis).

How do I know if I have arboviral encephalitis?

You cannot tell without seeing your health care provider. Your health care provider will complete a thorough history, review of signs and symptoms, physical examination, and laboratory testing to confirm whether or not you have an arboviral infection.

How is arboviral encephalitis treated?

The treatment is supportive to control fever, prevent dehydration, and control and reduce the symptoms of encephalitis. Antibiotics are not effective against viral infections, and there are no proven antiviral agents to treat arboviral encephalitis.

How can arboviral encephalitis be prevented?

Arboviral encephalitis can be prevented by preventing the bites of infected mosquitoes or ticks.

- Avoid being outdoors during the hours of dusk to dawn when mosquitoes are most active.
- Avoid high grass and brushy areas where ticks may be present.

- Take personal protective measures
 - Wear long sleeves and long trousers with cuffs stuffed inside top of socks to reduce skin surfaces available for mosquitoes to bite or areas for ticks to attach.
 - Use an insect repellent containing DEET on clothing and exposed skin.
- Make environmental changes to reduce shelter and breeding sites for mosquitoes and ticks.
 - Clean gutters and remove or empty water-holding containers such as buckets, tires, birdbaths, wading pool, and flower pots to reduce mosquito breeding sites.
 - Cut weeds and brush from your yard to reduce places for ticks to hide. This also eliminates shelter for rodents that could serve as a source of a blood meal for developing ticks.

All information presented is intended for public use. For more information, please refer to:

<http://www.cdc.gov/ncidod/dvbid/arbor/index.htm>

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